

5 a lower drive shaft coupled to the top drive output shaft and comprising an adjustable segment that
6 is selectively adjustable to adjust the length of the second drive shaft;

7 a lower pipe engagement assembly including a central passageway sized for receipt of the pipe
8 segment, the lower pipe engagement assembly being operative to releasably grasp the pipe segment, the
9 lower pipe engagement assembly being connected to the second drive shaft, whereby actuation of the top
10 drive assembly causes the lower pipe engagement assembly to rotate; and

11 means for applying a force to the second shaft to cause the length of the adjustable segment to be
12 shortened.

1 ~~2~~ 10. The pipe running tool of claim ~~9~~ 1, wherein the means for applying comprises a load
2 compensator in the form of a pair of hydraulic cylinders.

1 ~~3~~ 11. The pipe running tool of claim ~~9~~ 1, wherein the lower pipe engagement assembly is actuated
2 by one of a hydraulic system and a pneumatic system.

B1 1 ~~4~~ 12. The pipe running tool of claim ~~9~~ 1, wherein the lower pipe engagement assembly comprises
2 a generally cylindrical housing defining a central passage, and a plurality of slips disposed within the housing
3 and displaceable radially inwardly to engage a casing segment extending through the passage.

1 ~~5~~ 13. The pipe running tool of claim ~~9~~ 1, further including a block connected to the top drive
2 assembly and adapted for engaging a plurality of cables connected to the rig to selectively raise and lower
the top drive assembly.

1 ~~10~~ 14. (Amended) A pipe running tool mountable on a rig and designed for use in connection with
2 a top drive assembly adapted to be connected to the rig for vertical displacement of the top drive assembly
3 relative to the rig, the top drive assembly including a drive shaft, the top drive assembly being operative to
4 rotate the drive shaft, the pipe running tool comprising:

5 a lower drive shaft coupled to the top drive output shaft and comprising an adjustable segment that
6 is selectively adjustable to adjust the length of the second drive shaft;

7 means for applying a force to the second shaft to cause the length of the adjustable segment to be
8 shortened; and

9 a lower pipe engagement assembly comprising:

10 a housing defining a central passageway sized for receipt of a pipe segment, the housing
11 being coupled to the top drive assembly for rotation therewith,

12 a plurality of slips disposed within the housing and displaceable between disengaged and
13 engaged positions, and

14 a powered system connected to the respective slips and operative to selectively drive the slips
15 between the disengaged and engaged positions.

1 ~~11~~ 15. The pipe running tool of claim ~~13~~¹⁰, further including a hoist mechanism connected to the
2 lower pipe engagement assembly and operative to hoist a pipe segment into the central passageway of the
3 lower pipe engagement assembly.

B1 1 ~~12~~ 18. The pipe running tool of claim ~~15~~¹¹, wherein the hoist mechanism comprises an axle journaled
2 to the lower pipe engagement member, a pair of pulleys rotatably mounted to the axle, and a gear connected
3 to the axle, whereby the gear may be coupled to a drive system for rotating the axle.

1 ~~13~~ 17. The pipe running tool of claim ~~14~~¹⁰, wherein the powered system comprises one of a hydraulic
2 and pneumatic system.

1 ~~14~~ 16. The pipe running tool of claim ~~14~~¹⁰, further including a block connected to the top drive
2 assembly and adapted for engaging a plurality of cables connected to the rig.

1 ~~15~~ 19. In a system for assembling a pipe string comprising a top drive assembly, a lower pipe
2 engagement assembly coupled to the top drive assembly for rotation therewith and operative to releasably
3 engage a pipe segment, and a load compensator operative to raise the lower pipe engagement assembly
4 relative to the top drive assembly, a method for threadedly engaging a pipe segment with a pipe string,
5 comprising the steps of:

6 actuating the lower pipe engagement assembly to releasably engage a pipe segment;